

CALIFORNIA BUILDING STANDARDS COMMISSION

NOTICE REGARDING PROPOSED AMENDMENTS TO THE CALIFORNIA BUILDING CODE (CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 2)

MODIFICATIONS TO SEISMIC UPDATES TO STRUCTURAL PROVISIONS

The California Building Standards Commission (CBSC) is proposing modifications to the permanent adoption of emergency building standards, previously noticed, updating structural provisions in the California Building Code (California Code of Regulations, Title 24, Part 2).

Last day to submit comments: July 16, 2004

MODIFICATIONS MADE TO NOTICED EXPRESS TERMS

LEGEND FOR EXPRESS TERMS

1. 15-Day new California language: All such language appear double underlined.
2. Repealed 15-Day text: All such language appears in ~~double strikethrough~~.

Editorial Revisions to emergency adoption:

1. A referral note to use Table 16.1-N for BSC occupancies is being added to the model code Table 16-N.
2. Table 16.1-N [For BSC] Structural Systems; Two editorial modifications were made to this table. In from the original 45-Day language, the Omega symbol was not recognized by the software that was being used at the time. A place holder was produced by the software and was not corrected prior to it being distributed in the 45-Day language. The publishers final distributed version of this table was printed correctly.

The second of the two modifications was to correct a footnote reference for item 3. Moment-resisting frame system, sub-item 4, (OMRF). The footnote referred to footnote 6. This has been corrected to refer to the correct footnote 6.2.

3. In Section 2212B and 2215B there are exceptions to the sections following the equations for load factors. Within the exception language there is a misspelled word. This action will correct the misspelled word.
4. Chapter 23; The original format of the 45-Day Building Standards Commissions (BSC) emergency package resulted in a publication error. This action reformats the Chapter 23 amendments into an alternative format that does not change the effect of the originally proposed text, but clarifies BSC's application.

CHAPTER 16 – STRUCTURAL DESIGN REQUIREMENTS

TABLE 16-N – STRUCTURAL SYSTEMS ¹ (For Occupancies regulated by BSC use Table 16.1-N)

TABLE 16.1-N – [For BSC] STRUCTURAL SYSTEMS ¹

BASIC STRUCTURAL SYSTEM ²	LATERAL-FORCE-RESISTING SYSTEM DESCRIPTION	R	Ω_o	HEIGHT LIMIT FOR SEISMIC ZONES 3 AND 4 (feet)
				x 304.8 for mm
1. Bearing wall system	1. Light-framed walls with shear panels			
	a. Wood structural panel walls for structures three stories or less	5.5	2.8	65
	b. All other light-framed walls	4.5	2.8	65
	2. Shear walls			
	a. Concrete	4.5	2.8	160
	b. Masonry	4.5	2.8	160
	3. Light steel-framed bearing walls with tension-only bracing	2.8	2.2	65
	4. Braced frames where bracing carries gravity load			
	a. Steel	4.4	2.2	160
	b. Concrete ³	2.8	2.2	-
	c. Heavy timber	2.8	2.2	65
2. Building frame system	1. Steel eccentrically braced frame (EBF)	7.0	2.8	240
	2. Light-framed walls with shear panels.			
	a. Wood structural panel walls for structures three stories or less	6.5	2.8	65
	b. All other light-framed walls	5.0	2.8	65
	3. Shear walls			
	a. Concrete	5.5	2.8	240
	b. Masonry	5.5	2.8	160
	4. Ordinary braced frames			
	a. Steel ⁶	5.5-6	2	35 ⁶
	b. Concrete ³	5.6	-	-
	c. Heavy timber	5.6	2.2	65
	5. Special concentrically braced frames			
	a. Steel	6.4	2.2	240

3. Moment-resisting frame system	1. Special moment-resisting frame (SMRF)			
	a. Steel	8.5	2.8	N.L.
	b. Concrete ⁴	8.5	2.8	N.L.
	2. Masonry moment-resisting wall frame (MMRWF)	6.5	2.8	160
	3. Intermediate moment-resisting frame (IMRF)	4.5	2.8	35 ⁶
	a. Steel ⁶	5.5	2.8	-
	b. Concrete ⁵			
	4. Ordinary moment-resisting frame (OMRF)	3.5	2.8	6 6.2
	a. Steel ⁶	3.5	2.8	-
	b. Concrete ⁸	6.5	2.8	240
	5. Special truss moment frames of steel (STMF)			
4. Dual systems	1. Shear walls			
	a. Concrete with SMRF	8.5	2.8	N.L.
	b. Concrete with steel OMRF (Not Permitted)	4.2	2.8	160
	c. Concrete with concrete IMRF ⁵	6.5	2.8	160
	d. Masonry with SMRF	5.5	2.8	160
	e. Masonry with steel OMRF (Not Permitted)	4.2	2.8	160
	f. Masonry with concrete IMRF ³	4.2	2.8	-
	g. Masonry with masonry MMRWF	6.0	2.8	160
	2. Steel EBF	8.5	2.8	N.L.
	a. With steel SMRF	4.2	2.8	160
	b. With steel OMRF (Not Permitted)			
	3. Ordinary braced frames (Not Permitted)	6.5	2.8	N.L.
	a. Steel with steel SMRF	4.2	2.8	160
	b. Steel with steel OMRF	6.5	2.8	-
	c. Concrete with concrete SMRF ³	4.2	2.8	-
	d. Concrete with concrete IMRF ³			
	4. Special concentrically braced frames	7.5	2.8	N.L.
	a. Steel with steel SMRF	4.2	2.8	160
	b. Steel with steel OMRF (Not Permitted)			
	5. Steel IMRF (Not permitted)			
5. Cantilevered column building systems	1. Cantilevered column elements	2.2	2.0	35 ⁷
6. Shear wall-frame interaction systems	1. Concrete ⁸	5.5	2.8	160
7. Undefined systems	See Section 1629.6.7 and 1629.9.2	-	-	-

N.L.— no limit

¹ See Section 1630.4 for combination of structural systems.

² Basic structural systems are defined in Section 1629.6.

³ Prohibited in Seismic Zones 3 and 4.

⁴ Includes precast concrete conforming to Section 1921.2.7.

⁵ Prohibited in Seismic Zones 3 and 4, except as permitted in Section 1634.2.

⁶ Unless otherwise approved by the enforcement agency, in Seismic Zone 4 :

^{6.1} Steel IMRF are permitted for buildings 35 ft. or less in height and the dead load of the roof, walls or floors not exceeding 35 psf each; or for single-story buildings 60 ft. or less in height with dead load of the roof or walls not exceeding 15 psf each where the moment joints of field connections are constructed of bolted end plates; or single-family dwellings using light frame construction with $R = 3.0$ and $\Omega_o = 2.2$.

^{6.2} Steel OMRF are permitted for buildings 35 ft or less in height with the dead load of the roof, walls or floors not exceeding 15 psf each; or single-story buildings 60 ft or less in height with the dead load of the roof or walls not exceeding 15 psf each and where the moment joints of field connections are constructed of bolted end plates.

^{6.3} Steel Ordinary Braced Frames are permitted for buildings 35 ft or less in height; or penthouse structures; or single-story buildings 60 ft or less in height with the dead load of the roof or walls not exceeding 15 psf. each.

⁷ Total height of the building including cantilevered columns.

⁸ Prohibited in Seismic Zones 2A, 2B, 3 and 4. See Section 1633.2.7.

Notation

Authority: [Health and Safety Code, Section 18934.5]

Reference(s): [Health and Safety Code, Sections 18928 & 18934.5]

2212B - AMENDMENTS

The AISC-Seismic adopted by this Division apply to the seismic...

1. Part I, Sec. 1. of the AISC Seismic Provisions is revised as follows:

1. SCOPE

These provisions are intended for the design and construction of structural steel members and connections in the Seismic...

... to this Part, and Appendix S.

2. Part I, Sec. 4.1. of the AISC Seismic Provisions is deleted and replaced as follows:

4.1 Loads and Load Combinations

The loads and load combinations shall...

Exception: the load factor on L in load combination 4-1 shall be equal to 1.0 for garages, areas occupied as places of public assembly and all areas where the live load is greater than 100 psf.

2215B - AMENDMENTS

The AISC-Seismic adopted by this Division apply to the seismic...

1. Part III, Sec. 1. of the AISC Seismic Provisions is revised as follows:

1. SCOPE

These provisions are intended for the design and construction of structural steel members and connections in the Seismic Force...

...applicable to this Part, and Appendix S.

2. Part III, Sec. 4.1. of the AISC Seismic Provisions is deleted and replaced as follows:

2.1 Loads and Load Combinations

The loads and load combinations shall be those in...

Exception: the load factor on L in load combination 4-1 shall be equal to 1.0 for garages, areas occupied as places of public assembly and all areas where the live load is greater than 100 psf.

CHAPTER 23 – WOOD

Division III –DESIGN SPECIFICATIONS FOR ALLOWABLE STRESS DESIGN OF WOOD BUILDINGS

Part I – ALLOWABLE STRESS DESIGN OF WOOD

This standard, with certain exceptions, is the ANSI/NFPA NDS-91 [For BSC, NDS-97] National Design Specification for Wood Construction of the American Forest and Paper Association, 1991 Edition, and the Supplement to the 1991 Edition, [For BSC, NDS-97] National Design Specification, adopted by reference.

The National Design Specification for Wood Construction, 1991 Edition, [For BSC, NDS-97] and supplement are available from the American Forest and Paper Association, 1111 19th Street, NW, Eighth Floor, Washington, DC, 20036.

SECTION 2316 - DESIGN SPECIFICATIONS

2316.1 Adoption and Scope. The National Design Specification for Wood Construction, 1991 Edition (NDS), [For BSC, 1997 Edition (NDS) as amended by Sec. 2316.2] which is hereby adopted [For BSC except for item 14, 26 & 27] as a part of this code, shall apply to the design and construction of wood structures using visually graded lumber, mechanically graded lumber, structural glued laminated timber, and timber piles. National Design Specifications Appendix Section F, Design for Creep and Critical Deflection Applications, Appendix Section G, Effective Column Length, and Appendix Section J, Solution of Hankinson Formula are specifically adopted and made a part of this standard. The Supplement to the 1991 Edition National Design Specification, [For BSC, NDS-97] Tables 2A, 4A, 4B, 4C, 4D, 4E, 5A, 5B and 5C are specifically adopted and made a part of this standard.

Other codes, standards or specifications referred to in this standard are to be considered as only an indication of an acceptable method or material that can be used with the approval of the building official, except where such other codes, standards or specifications are specifically adopted by this code as primary standards.

2316.2 Amendments. ...

Notation

Authority: [Health and Safety Code, Section 18934.5]

Reference(s): [Health and Safety Code, Sections 18928 & 18934.5]

PUBLIC COMMENT PERIOD

Written comments on the modifications may be submitted to CBSC by July 16, 2004 and at the following address:

California Building Standards Commission
2525 Natomas Park Drive, Suite 130
Sacramento, CA 95833
Attention: Stanley T. Nishimura, Executive Director

Written comments may also be faxed to (916) 263-0959 or e-mailed to CBSC@dgs.ca.gov.

AVAILABILITY OF RULEMAKING DOCUMENTS

All of the information upon which the proposed regulations are based is contained in a rulemaking file, which is available for public review, by contacting the person named below.

Once the Final Statement of Reasons addressing public comment has been prepared, interested parties may obtain a copy by making a written request to the contact person named below.

CBSC CONTACT PERSON FOR PROCEDURAL AND ADMINISTRATIVE QUESTIONS

General questions regarding procedural and administrative issues should be addressed to:

Michael Nearman or Tom Morrison (back-up person)
2525 Natomas Park Drive, Suite 130
Sacramento, CA 95833

Telephone No.: (916) 263-0916
Facsimile No.: (916) 263-0959

Specific questions regarding the substantive and/or technical aspects of the proposed changes to the building standards should be addressed to:

Michael Nearman, Code Analyst
California Building Standards Commission
(916) 263-5888
Michael.Nearman@dgs.ca.gov
(916) 263-0959